



ARMSTRONG ENGINEERS and ASSOCIATES, INC.

861 Rood Avenue — Grand Junction, Colorado 81501 — (303) 245-3861



September 10, 1980

Plateau Resources Limited
772 Horizon Drive
Grand Junction, Colorado 81501

Attention: Bill Head

Re: Reclamation of the Alternate Site Impoundment Area

Dear Sir:

As requested we have prepared this letter which discusses various items of concern in the planning of the reclamation of the proposed Alternate Site Impoundment Area near the Tony M Mine.

The proposed impoundment dam will have a normal maximum operating water elevation of 4870 feet with overflows provided at 4872. The normal maximum pool operating level will provide a water surface area of approximately 17.0 acres, however, by borrowing soils from selected areas on the periphery of the storage area to provide material for the dam, the maximum water surface area may be increased by about 3.0 acres. Selective borrowing would, therefore, enable the dam to provide a maximum water surface area of 20.0 acres while not exceeding the maximum operating water elevation of 4870 feet.

Stripping of the borrow area is expected to be minimal due to the nature of the soils. The surface soils of the recommended borrow area are composed of highly plastic clayey silts and silty clays which are derivatives of the claystone which is normally found at a depth of from 1 to 2 feet in the area. The surface soils of the borrow area contain very little organic matter and are for the most part barren of any plant growth or undesirable soil types. The claystone of

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the area weathers very quickly until the weathered material builds up to the extent that it effectively seals the unweathered claystone. Due to this rapid weathering, borrow areas quickly regain their surface soil layer.

Stripping of the dam site and the upstream blanket is expected to produce on the order of 4000 yd³ of material which will not be desirable as construction material for the dam. This material should be transported and stored near the site for future reclamation use.

All borrow areas will be constructed such that no resulting earth slopes will exceed a 3 to 1, horizontal to vertical slope. This measure will help insure that there will be no slope stability problems within the borrow excavation areas.

The extent of the borrow area which will be above the maximum operating level of the pond is expected to be on the order of one to two acres. The dam itself will take up about 3.5 acres of which about 2.3 acres will not be covered by water. In total, the expected area to be affected by borrow excavation, construction and inundation will be about 24 to 25 acres.

During our field investigation our boreholes failed to locate the water table at the site. From borehole records of three (3) exploratory boreholes drilled within the proposed impoundment area the phreatic surface was located at an approximate elevation of 4400 feet which is about 420 feet below the lowest elevation of the impoundment area.

If you have any questions, please feel free to contact our office.

Sincerely,

ARMSTRONG ENGINEERS and ASSOCIATES, INC.

Byron N. Kelly
Byron Kelly
Geotechnical Engineer

Approved by:

Edward A. Armstrong
Edward A. Armstrong, PE-LS
President